

JADOOGAR V1.0

4C Transponder Data Calculator

ABSTRACT

This is the user manual for software "Jadoogar V1.0" which is basically a calculator for 4C Transponder Data Calculation. You can calculate the data with this software and write it in 4C transponder i.e. TPX1 from JMA or CN1 and start the car. NOTE: No hardware device is included with this calculator.

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Introduction:

This software is very useful for Auto locksmiths who has recently started EPROM work and is at a beginner or intermediate level in Auto locksmith industry.

With this software, you can calculate 4C transponder data from the bin file. It covers any car key using 4C data format in binary file of ecu's and Immobilisers. These formats are most commonly used in Toyota, Lexus, Ford, Kia, Hyundai etc.

Before we get to know this Jadoogar software, we must teach our self a few basic methods which are described in this document. It will help you and train you to read binary files yourself specifically for Toyota and Lexus cars.

Furthermore, if you have any queries you can contact us at autolocksmith@hotmail.co.uk and please visit our website for more information about the products and services provided by us at www.smartkeyprog.com.

Procedure:

As you can see in the figure 1 on Right side of the page, there are 8 boxes to input data from *bin file* and two buttons "Generate" and "Clear" respectively.

In input boxes, each box can have two bits data in it. You can put 8-bits inside the input boxes and leave the rest to "00".

Which data to put there for *key data generation* depends on the three types of formats used in 4C transponders. These formats depend on the type of reader you are using and the programmer who wrote the program. Some Bin file readers change the data format while reading because they want you to stick with their brand devices for further calculation.

Figure 1: Jadoogar Software (4C Calculator)

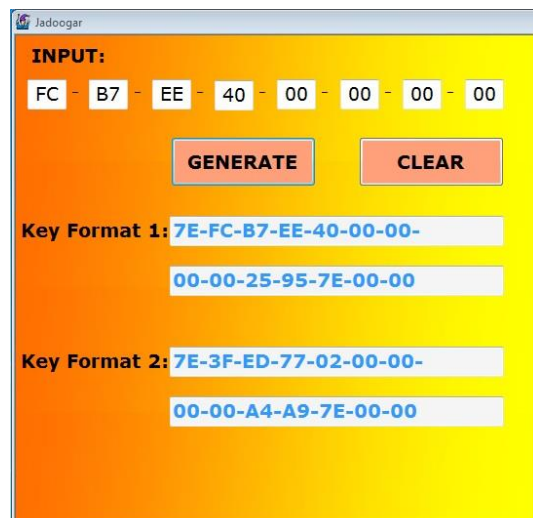


Table 3: TYPE 1

1	2	3	4
FC	B7	EE	40

Table 2: TYPE 2

4	3	2	1
40	EE	B7	FC

Table 1: TYPE 3

2	1	4	3
B7	FC	40	EE

Figure 2: IC 93C66 16-Bit Reading

fc	b7	ee	40	0	0	0	0	fc	b7	ee	40	0	0	0	0
fc	b7	ee	40	0	0	0	0	fc	b7	ee	40	0	0	0	0
fc	b7	ee	40	0	0	0	0	fc	b7	ee	40	0	0	0	0
fc	b7	ee	40	0	0	0	0	fc	b7	ee	40	0	0	0	0
e3	c9	30	50	0	0	0	0	e3	c9	30	50	0	0	0	0
e3	c9	30	50	0	0	0	0	e3	c9	30	50	0	0	0	0
e3	c9	30	50	0	0	0	0	e3	c9	30	50	0	0	0	0
e3	c9	30	50	0	0	0	0	e3	c9	30	50	0	0	0	0
7c	34	40	70	0	0	0	0	7c	34	40	70	0	0	0	0
7c	34	40	70	0	0	0	0	7c	34	40	70	0	0	0	0
7c	34	40	70	0	0	0	0	7c	34	40	70	0	0	0	0
7c	34	40	70	0	0	0	0	7c	34	40	70	0	0	0	0
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
13	f7	3a	60	0	0	0	0	13	f7	3a	60	0	0	0	0
13	f7	3a	60	0	0	0	0	13	f7	3a	60	0	0	0	0
13	f7	3a	60	0	0	0	0	13	f7	3a	60	0	0	0	0
13	f7	3a	60	0	0	0	0	13	f7	3a	60	0	0	0	0
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	3	3	3	3	3	3	3	3
ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	0	ff	ff	ff	c0	0	c0	0	c0	0	c0	0
c0	0	c0	0	c0	0	c0	0	ff	ff	ff	ff	ff	ff	ff	ff
ff	ff	ff	ff	ff	ff	ff	ff	68	68	68	68	68	68	68	68

Data Type 1:

Take example of the data which is already displayed in figure 1 above. You can see **FC B7 EE 40** in the input boxes. This is the data which we have got from the bin file of a Toyota Hiace. You can use any Binary or Hex File editor software to open the bin file which you have read from EEPROM using any reader (EEPROM Reader). I am using Hex Neo Editor and recommend it you as well.

Let's have a look at this binary file below which is for Toyota Hiace. I have highlighted the data already. As you can see, this is an example of data type 1. There are only three data types in the world for 4C format, only one of these will start the car. There could be two scenarios in lost key situation;

1. You have access to the car
2. You don't have access to the car

In first case, you can either write all three types of generated data on three transponders and only one will start the car or you can use single rewritable 4C transponder (TPX1 or CN1) three times.

In second case when you don't have access to the car and you must make transponder from only the ECU/Immobox then you can write the *Key Format Data 1* or *Key Format Data 2* on three transponders. The one which starts the car, check its format and after that you can program additional transponders using the same Data Type which has started the car. Which Key Format to use is discussed below.

Table 4: TYPE 1

1	2	3	4
FC	B7	EE	40



Data Type 2:

The example of second data type can be seen below. In this data type, bytes will be written in reverse manner. If you see the figures

below, then you will be able to understand it properly. Otherwise contact us or watch the YouTube video with instructions. This software is just a calculator for 4C, we do sell advanced level programs which decide itself whether to choose data format 1, 2 or 3. Visit our website for more details at www.smartkeyprog.com.

Table 5: TYPE 2

4	3	2	1
40	EE	B7	FC



Data Type 3:

Data type three is rare and found very less, most commonly used formats are the first two ones. For the third 4C transponder data calculation the data can be understood as 2|1|4|3. Have a look at the example data below;

Table 6: TYPE 3

2	1	4	3
B7	FC	40	EE



Key Format 1 or 2:

This calculator generates the 4C transponder data in two different key formats i.e. “Key Format 1” and “Key Format 2” respectively. Which format to use depends on the type of machine which you are using to write the data in 4C transponder. Most commonly used machines in auto locksmith industry are following;

- Silca commonly used RW3 or RW4
- ZBull, Zfull or any other European or Chinese Reader/Writer

For the machines which use original Texas Instrument Chip or Language E.g. Silca’s RW3 or RW4, use the Key Format 1 and write the data in transponder.

For all other transponder readers / writers, please use Key Format 2 for the data writing in 4C transponder. There are two most popular and efficient transponders available in market. First one is from JMA TPX1 and second is from china CN1.

Figure 4: TPX1



Figure 3: CN1

